



Ash-cloud of April and May 2010: Impact on Air Traffic

Eyjafjallajökull volcano, Iceland

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Brief summary



- » The airspace closures in Europe resulting from the eruption of the Eyjafjallajökull volcano from **14 April 2010** led to the disruption of some **100,000 flights** and **10 million passenger** journeys;
- » The main period of the crisis was **15th - 22nd April**, though the effects started earlier and continued later, especially in Scandinavia and Iceland;





April 14th 2010



Brief summary

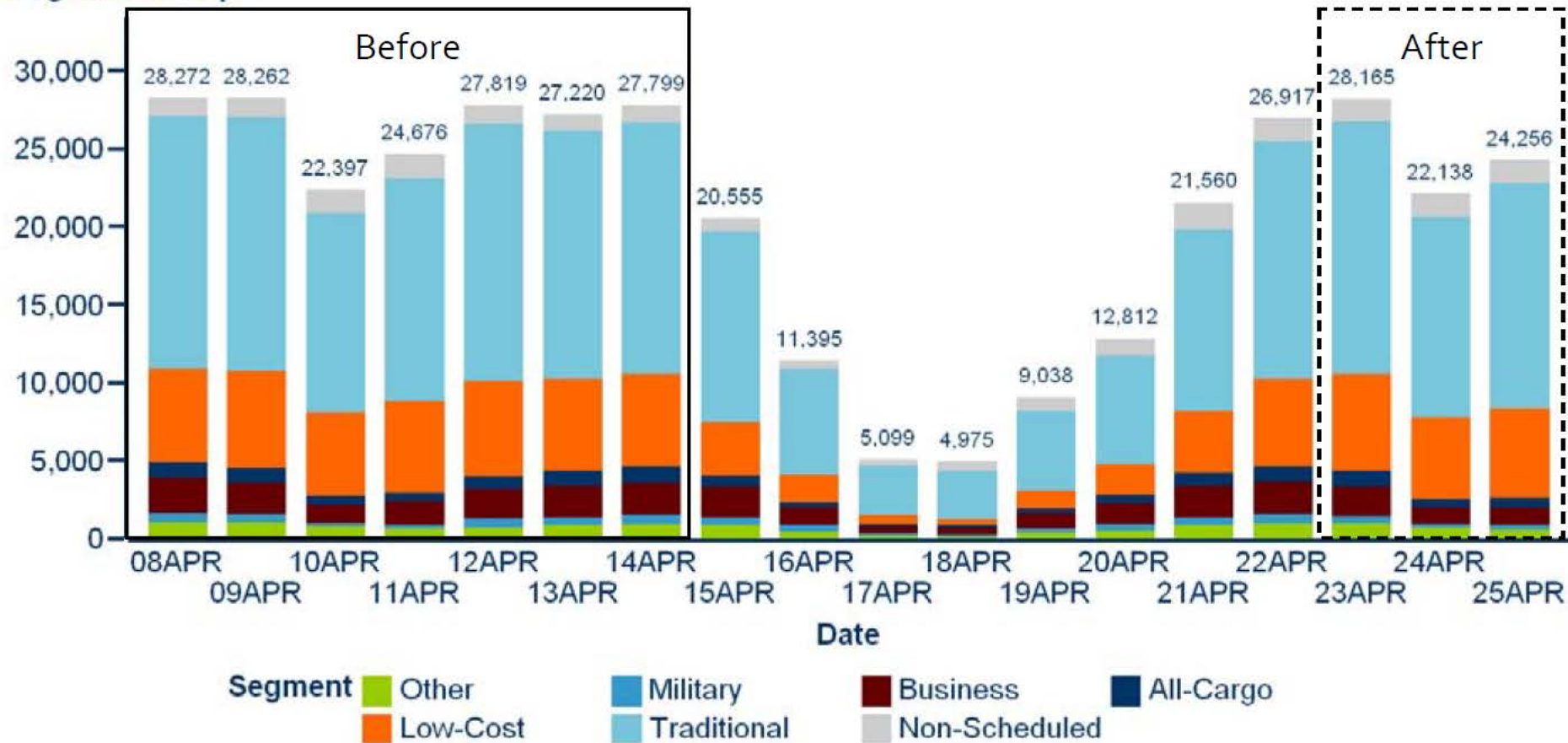


» 104,000 flights were cancelled during the 8-day crisis. That is 48% of expected traffic over 8 days, peaking at 80% on 18th April. That implies approximately 10 Million passengers unable to board their flight;



Traffic in Europe¹ before and during the April crisis.

Flights in Europe



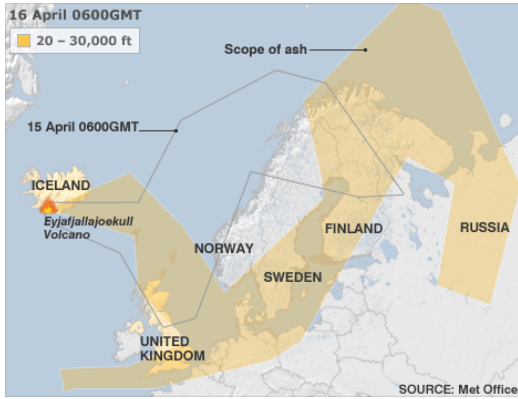
Brief summary



- » Aside from Iceland, three States saw a 90% reduction in traffic in April over 5 consecutive days: **Finland**, **Ireland** and the **United Kingdom**. Santa Maria (airspace of the Azores) was the only region with a net increase in flights.
- » In May, **Ireland** was the most affected, but principally in a reduction of its overflights;



Ash cloud progression...



... ≈ 400km/h



3 days after... Huge impact in Europe



Brief summary



- » In April, Icelandic traffic was affected for 13 rather than the 8 days seen elsewhere. The impact over the whole month was not quite as high as worst-affected Finland, principally because Iceland was able to maintain some flights to North America;
- » The most affected airports naturally correspond to the most affected States: **Helsinki**, **Dublin**, **Manchester** and **Edinburgh** all had less than 25% of the expected number of flights over the 8-day period.



ICAO reaction (Roberto Kobeh González, President of the Council of ICAO)



We all vividly remember the aftermath of the eruption of Iceland's Eyjafjallajökull volcano in 2010. For days, air transport in Europe came to a standstill, impacting thousands of flights in and out of the Region. Airlines lost hundreds of millions of dollars, tens of thousands of people were stranded at airports and the billions in wider economic impact were quickly felt around the world. This turned out to be the single most disruptive event in the history of civil aviation from natural causes.

ICAO reaction



- The eruption of volcano Eyjafjallajökull in 2010 caused significant disruptions to the European air transport system and triggered the setup of an international task force to develop new global provisions and a new template for the VACPs;
- The EUR and NAT Regions of ICAO had a common Volcanic Ash Contingency Plan (VACP) since 2006;



ICAO reaction



- In June 2014, at its 50th meeting, the North Atlantic Systems Planning Group (**NAT SPG/50**) **endorsed a new Volcanic Ash Contingency Plan** – North Atlantic Region (NAT Doc 006 Part II) as a Provisional Edition 2014, effective 13 November 2014;
- **This was subsequent to a change in the PANS-ATM, Doc 4444, applicable 13 November 2014, which transferred the responsibility regarding the decision to operate into an area of known or forecast VA contamination from Air Traffic Management (ATM) to Aircraft Operators (AO);**

ICAO reaction



- In October 2014, the 60th meeting of the programme Coordination Group (**COG/60**) of the **endorsed** a working draft for **the European VACP**;
- To improve the coordination between EUR and NAT Regions, a Volcanic Ash Task Force was established (**2015 EUR/NAT VATF**), with the objective to agree on a common version;



ICAO reaction



- Some general principles to guide the review of the proposed draft common EUR/NAT VACP were proposed, and the 2015 EUR/NAT VACP unanimously supported them as follows:
 - a) one single common document for both the EUR and the NAT ICAO Regions;
 - b) designed for the aviation community at large, i.e. not only for Air Navigation Services Providers (ANSP), but also for airspace users, etc.;
 - c) containing the greatest extent of common text that could possibly be (with variations outside the main body); and
 - d) named “Volcanic Ash Contingency Plan” (VACP).



ICAO EUR/NAT VACP



- In **July 2016**, the ICAO Regional Director, Europe and North Atlantic took appropriate actions to publish and **promulgate the EUR/NAT VACP (EUR Doc 019, NAT Doc 006 Part II, Edition 2.0.0)**; and
- Following the excellent work, the 2015 EUR/NAT Volcanic Ash Task Force (**VATF**) was disbanded.

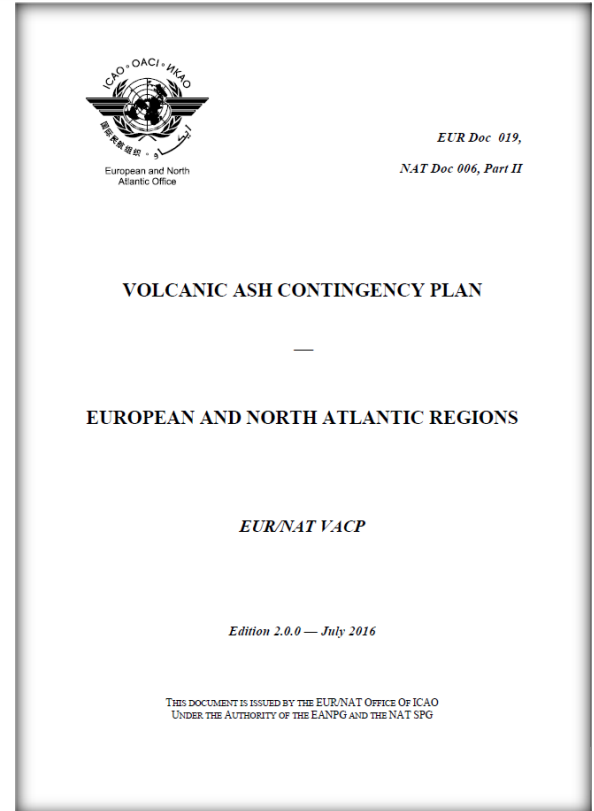
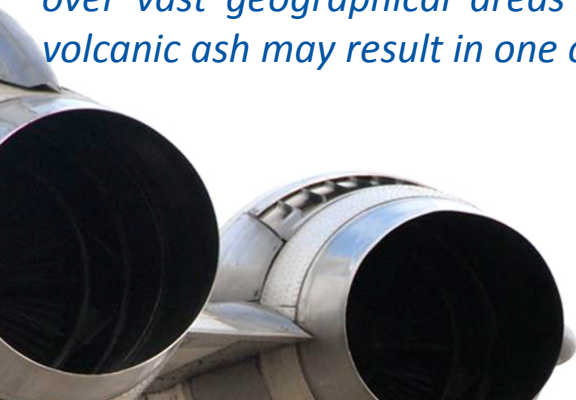




ICAO EUR/NAT VACP

Basic contents.

“An eruption volcanic ash can reach and exceed the cruising altitudes of turbine-powered airplanes within minutes and spread over vast geographical areas within a few days. Encounters with volcanic ash may result in one or more problems to airspace users.”



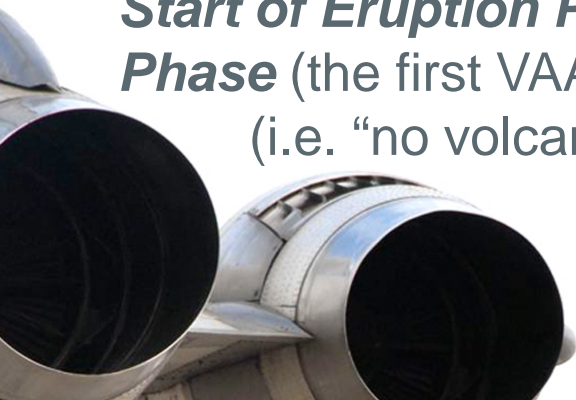


REGIONAL PREPARATION

- The successful operation of air traffic in case of a volcanic ash event depends on coordinated arrangements (*responsibilities and procedures*).

RESPONSE TO A VOLCANIC ASH EVENT

- The response to a volcanic event that impacts air traffic has been divided into four distinct phases — a ***Pre-Eruption Phase*** (when applicable), a ***Start of Eruption Phase***, an ***On-going Eruption Phase***, and a ***Recovery Phase*** (the first VAA containing the statement “**NO VAEXP**” (i.e. “no volcanic ash expected”).





PRINCIPLES ON THE DOCUMENT

Consistent with the practice of ICAO, the **2015 EUR/NAT VATF** agreed to use ICAO definitions for Appendices or Attachments as follows, and endorsed that these definitions be included in the document:

- a) **Appendices** comprise material grouped separately for convenience but forming part of the main body of the document; and
- b) **Attachments** comprise material supplementary to the main body of the document, or included as a guide to the application of the provisions in the document.

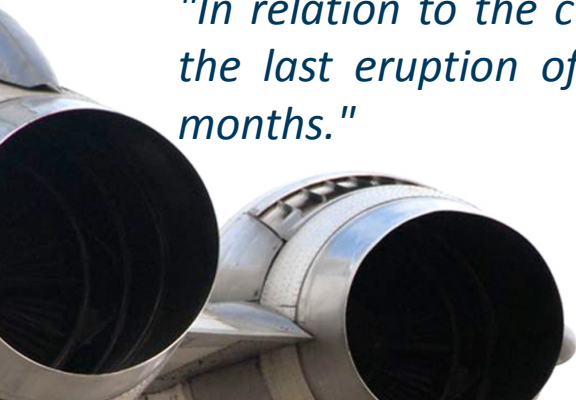




Prof Bill McGuire, professor at the *Aon Benfield UCL Hazard Research Centre (U.K.)*, said it was not *"particularly unusual"* for ash from Icelandic eruptions to reach the UK.

"Such a large eruption... would have the potential to severely affect air travel at high northern latitudes for six months or more.

"In relation to the current eruption, it is worth noting that the last eruption of Eyjafjallajökull lasted more than 12 months."





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THANK YOU